

1. (AMENDED)

A method for mounting a rotatable reflector antenna having a main reflector with outermost side portions and an axial center, to reduce a radius of a swept arc of said main reflector as said main reflector is rotated about an azimuthal axis of rotation, said method comprising the steps of:

supporting said main reflector on a platform;

using a motor to rotate said platform about said azimuthal axis of rotation;

using an encoder to track said azimuthal axis of rotation and provide feedback to said motor; and

locating said main reflector on said platform such that said azimuthal axis of rotation is disposed forwardly of a plane extending perpendicularly through said axial center of said main reflector.

4. (AMENDED)

A method for mounting a rotatable reflector antenna having a main reflector with outermost lateral side portions and an axial center, on an aircraft, in a manner which reduces a radius of a swept arc of said lateral side portions of said main reflector as said main reflector is rotated about an azimuthal axis of rotation, said method comprising the steps of:

supporting said main reflector on a member adjacent an outer skin of said aircraft;

using a motor to rotate said member, and thereby said main reflector, about said azimuthal axis of rotation;

using an encoder to track said azimuthal axis of rotation and provide feedback to said motor; and

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locating said azimuthal axis of rotation forwardly of a plane extending perpendicular to said axial center of said main reflector.

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7. (AMENDED) A method for mounting a rotatable reflector antenna having a curved main reflector with outermost lateral side portions and an axial center, to reduce a radius of a swept arc of said main reflector as said main reflector is rotated about an azimuthal axis of rotation, said method comprising the steps of:

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supporting said main reflector on a platform;
using a motor to rotate said platform about said azimuthal axis of rotation;
using an encoder to track said azimuthal axis of rotation and provide feedback to said motor; and

locating said main reflector on said platform such that said azimuthal axis of rotation of said platform is forwardly of said axial center of said main reflector.

(b)
9. (AMENDED) An antenna adapted to be rotated about an azimuthal axis of rotation in a manner which reduces the radius of an envelope within which said antenna moves during rotation of said antenna, said antenna comprising:

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a curved main reflector having an axial center and outermost lateral side edges;
a platform for supporting said curved main reflector;
a motor for rotating said platform about said azimuthal axis; and
an encoder to track said azimuthal axis and provide feedback to said motor;

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wherein said azimuthal axis is disposed, relative to said curved main reflector, such that said azimuthal axis is located forwardly of said axial center of said curved main reflector.

Please add the following new claims.

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14. (NEW) The method of claim 1, further comprising the step of using an elevation motor to position said main reflector at a predetermined elevation angle.

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15. (NEW) The method of claim 4, further comprising the step of using an elevation motor to position said main reflector at a predetermined elevation angle.

16. (NEW) The method of claim 7, wherein said step of supporting said main reflector further comprises the step of using an elevation motor to position said main reflector at a predetermined elevation angle.

17. (NEW) The antenna of claim 9, further comprising an elevation motor for positioning said main reflector at a predetermined elevation angle.
